

I CLAIM,

1. An articulated bed convertible to a chair position, said bed comprising a mattress formed of sections including a leg rest section, said mattress sections being secured to respective support frames, articulating linkage means to articulate said support frames, said mattress leg rest section being secured to a retractable support frame, means to support said support frames elevated from a floor surface, said leg rest section of said mattress having at least a compressible section thereof formed of compressible material, compressible interconnecting means to compress said compressible material to shorten the length of said compressible section, restraining means to restrain said compressible material as it is compressed and decompressed when said support frames are displaced from a horizontal position to an articulated chair position and vice versa.
2. An articulatable bed as claimed in claim 1 wherein said compressible section is constituted by a high density soft foam piece material having an undulated surface section defining peaks and valleys formations dimensioned and positioned such that said compressible means can cause said peaks formations to be displaced closer to one another within said valleys formations to compress said soft foam piece.
3. An articulatable bed as claimed in claim 2 wherein said peaks and valleys formations are alternating peaks and valleys formations.
4. An articulatable bed as claimed in claim 2 wherein said compressible interconnecting means comprises a pair of rigid connecting members interconnected together by interconnecting telescoping means to cause guided displacement of a displaceable one of said rigid members relative to a stationary one of said rigid members, said

displaceable one of said rigid members being connected to displacement means.

5. An articulatable bed as claimed in claim 4 wherein said interconnecting telescoping means is constituted by at least a pair of telescoping interconnecting members secured between said rigid members, said telescoping interconnecting members being retained captive in said soft foam piece in a solid section of said foam piece under said undulated surface section.

6. An articulatable bed as claimed in claim 5 wherein said telescoping interconnecting members are retained captive in respective elongated cavities formed in said soft foam piece under said undulated surface section.

7. An articulatable bed as claimed in claim 6 wherein said elongated cavities are elongated channels formed in a lower surface of said soft foam piece, said undulated surface section being formed in a top surface of said soft foam piece.

8. An articulatable bed as claimed in claim 7 wherein said soft foam piece is a rectangular block of Styrofoam material having a predetermined thickness.

9. An articulatable bed as claimed in claim 6 wherein said restraining means is constituted by a fabric material tube spot glued in each said elongated cavities, said telescoping interconnecting members extending in a respective fabric material tube, telescoping tubes secured between said pair of rigid members and extending transversely therebetween, said rigid members being disposed parallel to one another and having securement means for connection to a displaceable leg rest section support frame.

10. An articulatable bed as claimed in claim 9 wherein said fabric material tube comprises a double material tube having an outer Neoprene[®] layer for improved adherence, and an inner Nylon[®] layer to reduce friction with said telescoping interconnecting members.

11. An articulatable bed as claimed in claim 1 wherein said peaks and valleys formations are curved peaks and valleys formations defining a wave cross-section.

12. An articulatable bed as claimed in claim 9 wherein said tubular members are hollow telescoping aluminum tubes, and a nylon bushing disposed between said tubes, there being three of said telescoping tubes secured between said pair of rigid members and extending transversely therebetween, said rigid members being disposed parallel to one another and having securement means for connection to a displaceable leg rest section support frame.

13. An articulatable bed as claimed in claim 12 wherein said displaceable leg rest section support frame has a stationary frame section and a sliding frame section constituting said displacement means, connecting means uppermost of said stationary frame section and lowermost of said sliding frame section, said rigid members being immovably connected to a respective one of said connecting means.

14. An articulatable bed as claimed in claim 13 wherein said securement means and connecting means are fastener receiving through bores, and fasteners for interconnecting said rigid members to said displaceable leg rest section support frame through said through bores.

15. An articulatable bed as claimed in claim 13 wherein said bottom displaceable frame section is secured to a displaceable device constituting said displacement means.

16. An articulatable bed as claimed in claim 15 wherein said displaceable device is one of an electric motor drive linkage, a pneumatic drive linkage, an hydraulic drive linkage or a manually operable drive linkage.

17. An articulatable bed as claimed in claim 8 wherein said foam piece is a foam block secured to said rigid members at opposed ends thereof by glue.

18. An articulatable bed as claimed in claim 1 wherein said mattress sections comprise a backrest section, a seat rest section and said leg rest section all said sections being disposed in a single envelope.

19. An articulatable bed as claimed in claim 1 wherein said bed is a hospital bed.

20. A mattress leg rest section for use with an articulated bed convertible to a chair position, said mattress leg rest section comprising at least a compressible section formed of compressible material and having an undulated surface section defining peaks and valleys formations dimensioned such as to be compressed by compressible interconnecting means to cause said peaks formations to be displaced closer to one another within said valleys formations to shorten said mattress leg rest section.

21. A mattress as claimed in claim 20 wherein said peaks and valleys formations are alternating peaks and valleys formations.

22. A mattress as claimed in claim 18 wherein said compressible interconnecting means comprises a pair of rigid connecting members interconnected together by interconnecting telescoping means to cause guided

displacement of a displaceable one of said rigid members relative to a stationary one of said rigid members, said displaceable one of said rigid members being connected to displacement means.

23. A mattress as claimed in claim 20 wherein said telescoping interconnecting members are retained captive in respective elongated cavities formed in said soft foam piece under said undulated surface section.

24. A mattress as claimed in claim 21 wherein said elongated cavities are elongated channels formed in a lower surface of said soft foam piece, said undulated surface section being formed in a top surface of said soft foam piece.

25. A mattress as claimed in claim 22 wherein said soft foam piece is a rectangular block of Styrofoam material having a predetermined thickness.

26. A mattress as claimed in claim 23 wherein said restraining means is constituted by a fabric material tube spot glued in each said elongated cavities, said telescoping interconnecting members extending in a respective fabric material tube, telescoping tubes secured between said pair of rigid members and extending transversely therebetween, said rigid members being disposed parallel to one another and having securing means for connection to a displaceable leg rest section support frame.

27. A mattress as claimed in claim 24 wherein said fabric material tube comprises a double material tube having an outer Neoprene[®] layer for improved adherence, and an inner Nylon[®] layer to reduce friction with said telescoping interconnecting members.

28. A mattress as claimed in claim 25 wherein said peaks and valleys formations are curved peaks and valleys formations defining a wave cross-section.

29. A mattress as claimed in claim 26 wherein said tubular members are hollow telescoping aluminum tubes, and a nylon bushing disposed between said tubes, therebeing three of said telescoping tubes secured between said pair of rigid members and extending transversely therebetween, said rigid members being disposed parallel to one another and having securement means for connection to a displaceable leg rest section support frame.